

2013 WATER QUALITY REPORT

Consumer Confidence Report for the period of January 1 to December 31, 2013



CITY OF HORSESHOE BAY

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This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

For more information regarding this report contact:

Jeff Koska, Utilities Director

Office: 830-598-9981

Email: city@horseshoe-bay-tx.gov

Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en espanol, favor de llamar al telefono (830) 598-8741.

The source of drinking water used by the City of Horseshoe Bay is

Surface Water from Lake Lyndon B. Johnson (LBJ).

Information about Source Water Assessments

A Source Water Susceptibility Assessment for your drinking water was completed by the Texas Commission on Environmental Quality (TCEQ). This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment allows us to focus source water protection strategies. Results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, contact Jeff Koska, Utilities Director.

- For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL:
<http://tceq4apmgwebp1.tceq.texas.gov:8080/swav/Controller/index.jsp?wtrsrc=>
- Further details about sources and source water assessments are available in Drinking Water Watch at the following URL: <http://dww.tceq.state.tx.us/DWW/>

SPECIAL NOTICE

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pickup substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; and,
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the water department at 830-598-8741.

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly or immunocompromised persons such as those undergoing chemotherapy for cancer; persons who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders, can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care providers. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (800) 426-4791.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about the lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Definitions <i>(The following tables contain scientific terms and measures used in this report, some of which may require explanation.)</i>			
MCL	Maximum Contaminant Level	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.	
MCLG	Maximum Contaminant Level Goal	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.	
MRDL	Maximum Residual Disinfectant Level	The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.	
MRDLG	Maximum Residual Disinfectant Level Goal	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.	
AL	Action Level	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.	
ALG	Action Level Goal	The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.	
AVG	Average	Regulatory compliance with some MCLs are based on running annual average of monthly samples.	
NTU	Nephelometric Turbidity Units	A measure of turbidity.	
mg/L ppm	Milligrams per liter or parts per million – or one ounce in 7,350 gallons of water.	ug/L ppb	Micrograms per liter or parts per billion – or one ounce in 7,350,000 gallons of water.
MAX	Maximum	MIN	Minimum
NA	Not Applicable	YEAR	Collection Date; the year in which sample(s) were collected.

Water Quality Test Results									
2013 Regulated Contaminants Detected									
Coliform Bacteria					E.Coli or Fecal Coliform Bacteria – Not Detected				
Date of Detection		MCLG		MCL		Highest Number of Positive		Violation	Likely Source of Contamination
02/19/2013		0		1		1		NO	Naturally present in the environment
Lead and Cooper									
Year	Contaminant (Unit)		90 th Percentile	Action Level (AL)	# Sites Over AL	MCLG	Violation	Likely Source of Contamination	
2012	Cooper (ppm)		0.199	1.3	0	1.3	NO	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.	
2012	Lead (ppb)		2.49	15	0	0	NO	Corrosion of household plumbing systems, erosion of natural deposits.	
Maximum Residual Disinfectant Level									
Year	Disinfectant (Unit)			AVG Level	MIN Level	MAX Level	MRDLG	MRDL	Likely Source of Chemical
2013	Free Chlorine / Chloramines (ppm)			3.2	2.0	4.8	4.0	4.0	Disinfectant used to control microbes
Disinfectants and Disinfection By-Products									
Year	Disinfectant s and Disinfection By-Products (Unit)			Highest Level Detected	Range of Levels Detected		MCL	Violation	Likely Source of Contamination
2013	Haloacetic Acids (HAA5) (ppb)			20	8.4-30.9		60	NO	By-product of drinking water disinfection.
2013	Total Trihalomethanes (TThm) (ppb)			35	0-55.3		80	NO	By-product of drinking water disinfection.
Inorganic Contaminants									
Year	Contaminant (Unit)	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination		
2013	Arsenic (ppb)	2	1.59-1.74	0	10	NO	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.		
2013	Barium (ppm)	0.052	0.0377-0.052	2	2	NO	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits		
2013	Fluoride (ppm)	0.6	0.22-0.64	4	4	NO	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories		
2013	Nitrate - (Measured as Nitrogen) (ppm)	0.093	0.047-0.093	10	10	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits		
2013	Selenium (ppb)	2.41	2.13-2.41	50	50	NO	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.		
2013 UNREGULATED CONSTITUENTS DETECTED									
Many constituents (such as calcium, sodium, or iron) which are often found in drinking water can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.									
Secondary Constituents and Other Unregulated Constituents									
Year	Constituent (Unit)		AVG Level	MIN Level	MAX Level	Limit	Likely Source of Contamination		
2013	Aluminum (mg/L)		0.1337	0.0384	0.229	0.2	Abundant naturally occurring element.		
2013	Bicarbonate (mg/L)		146	143	149	NA	Corrosion of carbonate rocks such as limestone.		
2013	Calcium (mg/L)		30.6	30.5	30.7	NA	The fifth most abundant metal in the Earth’s crust; It occurs naturally in limestone, gypsum, and fluorite.		

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2013	Chloride (mg/L)	42.0	41.9	41.9	300	A chemical compound of chlorine used in water purification.
2013	Magnesium (mg/L)	24.1	23.9	24.3	NA	The eighth most abundant metal in the Earth’s crust; it occurs naturally in deposits of magnesite, dolomite, and other minerals.
2013	Manganese (mg/L)	0.011	0.001	0.021	.05	Occurs naturally in the environment as solids in soils and small particles in water.
2013	Nickel (mg/L)	.0004	.0004	.0004	0.1	Erosion of natural deposits.
2013	pH (units)	7.95	7.3	8.6	NA	Measure of corrosivity of water.
2013	Sodium (mg/L)	29	22.7	32.6	NA	Erosion of natural deposits.
2013	Sulfate (mg/L)	26.6	23.1	30.1	300	Naturally occurring; low to moderate concentrations of both chloride and sulfate ions add palatability to water.
2013	Total Alkalinity (mg/L)	146	143	149	NA	Naturally occurring soluble mineral salts.
2013	Total Dissolved Solids (mg/L)	292.5	271	314	1000	Total dissolved mineral constituents in water.
2013	Total Hardness Calcium and Magnesium (mg/L)	175.5	175	176	NA	Two of the principal elements making up the earth's crust; its compounds, when dissolved, make the water hard. The presence of calcium and magnesium in water is a factor contributing to the formation of scale and insoluble soap curds which are a means of clearly identifying hard water.
	mg/L conversion to grains/gal	10.25	10.22	10.28	NA	
2013	Zinc (mg/L)	.0021	.0021	.0021	5	Moderately abundant naturally occurring element; high resistance to atmospheric corrosion. Used in the metal industry.

Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration.

Year	Turbidity	Limit Treatment Technique	Level Detected	Violation	Likely Source of Contamination
2013	Highest Single Measurement	1 NTU	0.8	NO	Soil runoff
2013	Lowest Monthly % Meeting Limit	0.3 NTU	99.41%	NO	Soil runoff

MESSAGES FROM THE CITY

A health-related note about landscape irrigation. Your home’s landscape irrigation system can be a potential contamination source for household potable water should a reverse flow occur. To protect your potable water from flow reversals, make sure you have installed an adequate backflow prevention device on the irrigation main line and have the device tested annually.

We encourage public interest and participation in our community’s decisions affecting drinking water. City Council Meetings are held monthly at City Hall. Meeting schedules are posted on the City’s website or you may call City Offices to obtain the schedule.

CITY OF HORSESHOE BAY – WATER CONSERVATION STAGE 3 – ONCE PER WEEK WATERING ALLOWED		2013 WATER SYSTEM USAGE DATA	
RESIDENTIAL CUSTOMERS		Water Produced in 2013:	
Even Numbered Address <i>(Addresses ending in 0,2,4,6,8)</i>	Odd Numbered Address <i>(Addresses ending in 1,3,5,7,9)</i>	642,081 million gallons (MG) or 2292.0 acre/ft	
Water on Thursday from 7PM to 10AM on Friday	Water on Saturday from 7PM to 10AM on Sunday	Maximum Month:	August - 82.7 MG
		Minimum Month:	February - 27.9 MG
		Maximum Day :	August 11 th - 3.834 MG
		Average Day:	1.80 MG
COMMERCIAL AND MULTI-FAMILY CUSTOMERS		# of Service Connections:	4703
Water on Tuesday from 7PM to 10AM on Wednesday		Water Going Toward Outside Use:	61%
To check current restriction status or for additional water conservation information please refer to the City’s website at: http://www.horseshoe-bay-tx.gov		Water Entering Sewer:	33%